-nikander-hip-mm-01

HIP WG meeting
IETF-59, March 3, Lotte Hotel, Seoul
Pekka Nikander

Status overview

- -01 posted in end of Dec 2003
  - Considerably different from -00
- Some corrections in pre-02
  - http://www.tml.hut.fi/~pnr/HIP/draft-nikander-hip-mm-02-pre-Jan22.txt
- Bad experiences about new RR mechanism
  - Hard to implement
  - Draft does not tell enough

Problems and goals

- Many of the same problems as in MOBIKE
  - But worse since we want to multi-home and support HIP-friendly middle boxes(NAT, FW)
- Basic goals:
  - Keep IPsec SAs in sync to that replay protection does not drop packets
  - Create SPI mappings in middle boxes
    - Needed in both directions, separately

Resolved issues (briefly)

- RR is a MUST → RR is a SHOULD
- More detailed motivation → to be added
  - (Consider material on previous slide)
- Terminology: "interface" → "address group"

Open issues

- (Haven't had time to check that this is all)
- Return routability test (separate slides)
- RTT estimates to be gathered in RR?
- More precision in address selection?
  - Dealing with ingress filtering
- Need per-path SAs in both directions?
- Movement detection?

Return routability

- Currently based on NES
  - A sends a REA
  - B sends back a NES requesting A to start sending data on a new SPI
  - A starts to send to the new SPI
  - Return routability completed, B starts to send to the new IP address
- Complaints by impelentors (next slide)

Complaints on -01 RR

- Hard to implement
- For multi-homing, actually need address groups in both ends
  - Even if one end has only one interface
  - Reflects the fact that packets in both directions may be flowing over multiple paths

Approaches

- Keep the current NES based mechanism
  - Clarify, clarify, get input from implementors
- Move back to the AC / ACR model (-00 model)
  - Maybe easier for humans to understand
  - Probably results in more code and maybe also larger packets
- Which way to go?